

IN THE CLAIMS:

1. (Withdrawn) A method for the manufacture of a matrix provided with a microstructure on its surface, which microstructure is reproducible in a plastic material as an inverted microstructure in a machine used, said microstructure being produceable by having a master with a microstructure on its surface coated with a layer, characterized in that

a) a first master, with a first chosen microstructure, is produced via a first method,

b) a second master, with a second chosen microstructure, is produced via a second method,

c) said first and second masters or matrices produced therefrom are applied with their microstructured surfaces adjacent,

d) said first and second masters or equivalent are covered by a first layer pertaining to the matrix,

e) said layer is covered by a thicker layer, a carrier, and

f) said first and second first layer pertaining to the matrix and said carrier are removed from said masters or the equivalent, as a matrix-related unit.

2. (Withdrawn) A method as claimed in claim 1, characterized in that said first master is produced having a number of similar or dissimilar surface sections, and in that each of these, transferred to a matrix, is removed to form a first matrix section.

3. (Withdrawn) A method as claimed in claim 1, characterized in that said second master is produced having a number of similar or dissimilar surface sections, and in that each of these, transferred to a matrix, is removed to form a second matrix section.

4. (Withdrawn) A method as claimed in claim 1, 2 or 3, characterized in that one or more first matrix sections and one or more second matrix sections are applied with their microstructured surfaces against a support.

5. (Withdrawn) A method as claimed in claim 1, characterized in that a sheet of nickel is chosen as the support.

6. (Withdrawn) A method as claimed in claim 5, characterized in that said sheet consists of a flat sheet with polished surface, a mirror surface.

7. (Withdrawn) A method as claimed in claim 1, characterized in that said first matrix or a first matrix section, and said second matrix or a second matrix section, are pressed against a support at least while they are being covered by a first wear layer.

8. (Withdrawn) A method as claimed in claim 1, characterized in that the first matrix or matrix section has been provided with a first type of one amongst several selectable microstructures.

9. (Withdrawn) A method as claimed in claim 1, characterized in that the second matrix or matrix section has been provided with a second type of one amongst several selectable microstructures.

10. (Withdrawn) A method as claimed in claim 1, characterized in that a carrier is formed by filling a mould cavity with a plastic composite.

11. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that the plastic composite is selected from a mixture of a polymer material and a filler material, such as quartz or metal-filled epoxy or silicon polymer.

12. (Withdrawn) A method as claimed in claim 1, characterized in that the plastic composite and the carrier formed are chosen with a coefficient of linear expansion and/or a heat transfer capability and/or a thermal capacitive capability suitable for a chosen process in the injection-moulding machine.

13. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that the plastic composite is cured by the supply of heat and/or by being irradiated by UV light.

14. (Withdrawn) A method as claimed in claim 1, characterized in that the plastic composite is selected from two-component types.

15. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that a plastic composite, under a hard first wear layer, is selected with a suitable heat transfer and/or thermal capacitive capability for keeping the plastic compound pressed out in the machine hot.

16. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that said matrix is coated with a second wear layer on the surface facing away from the surface of the first wear layer.

17. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that said first wear layer and/or said second wear layer consist of titanium nitride or DLC (Diamond-Like-Carbon).

18. (Withdrawn) A method as claimed in claim 1 or claim 10,

characterized in that said thin first wear layer is in the form of a metal layer and is applied by means of a sputtering process and/or a vaporising process or, alternatively, a plating process.

19. (Withdrawn) A method as claimed in claim 1 or claim 10, characterized in that the first wear layer and/or metal layer is selected having a thickness adapted to stipulated requirements.

20. (Withdrawn) A method as claimed in claim 1, or claim 10, characterized in that the surface structure of the plastic composite on the surface facing away from the wear and/or metal layer, is machined flat.

21. (Currently Amended) A matrix, said matrix being suitable for placement as an insert in a mould cavity insert for of a compression-moulding, embossing or injection-moulding machine which ~~insert comprises a matrix~~ providing matrix comprises a microstructure on its surface, wherein

(a) said microstructure comprises microstructured surfaces of a first and a second master or of matrices produced therefrom, which surfaces are oriented adjacent each other,

(b) said first and second masters or said matrices, on their sides facing away from their microstructured surfaces, are covered by a first layer pertaining to the matrix, and

(c) said first layer is covered by a carrier layer.

22-24. (Cancelled)

25. (Currently Amended) The ~~mould cavity insert matrix~~ as claimed in claim 21, wherein said surface of the first master has been provided with a first microstructure.

26. (Currently Amended) The ~~mould cavity insert matrix~~ as claimed in claim 21, wherein said surface of the second master has been provided with a second microstructure.

27. (Currently Amended) The ~~mould cavity insert matrix~~ as claimed in any one of claims 21, 25 or 26, wherein said first and second surfaces have different structures.

28. (Currently Amended) The ~~mould cavity insert matrix~~ as claimed in claim 21, further comprising a wear layer overlaying said first and second microstructured surfaces.

29. (Currently Amended) The ~~mould cavity insert matrix~~ according to claim 28, wherein said wear layer is a plastic composite or metal.